

ABSTRACT

A method of continuously manufacturing tubular filter products includes rotating a mandrel in a first rotational direction, depositing nonwoven fibers on the mandrel to form a tube and continuously withdrawing the tube from the mandrel by engaging a peripheral surface of the tube with one or more detents extending radially from a surface of a roller. The roller rotates in a direction opposite the first rotational direction as the one or more detents engage the tube to a predetermined depth relative. For carrying out such a method, an apparatus includes a melt blowing die assembly for expelling melt blown fibers, a rotating mandrel arranged to receive the melt blown fibers from the melt blowing die assembly for allowing the melt blown fibers to accumulate in a body thereon and a rotating roll having a pattern of protruding detents. The roll is arranged so that at least some of the detents will come within a predetermined distance of the mandrel for contacting the melt blown fibers in a manner forcing the melt blown fibers accumulated on the mandrel to move in a direction parallel to the mandrel. A tubular filter product includes a plurality of melt blown fibers in a body defining an outer surface and an inner surface, the body defining a pattern of cavities between the outer surface and the inner surface.

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